

**Notice of Allowability**

Application No.

09/890,860

Examiner

Walter B. Aughenbaugh

Applicant(s)

DODD ET AL.

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1772

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Appeal Brief filed May 30, 2006.
2. ☒ The allowed claim(s) is/are 53-61 and 64-67.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 8/03/06
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
JENNIFER C. MCNEIL  
SUPERVISORY PATENT EXAMINER  
8/4/06

### EXAMINER'S AMENDMENT

1. There are no drawings in this application.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with Bryan H. Davidson on August 3, 2006.
4. The application has been amended as follows:

In the title, replace "Hear" with --Heat--. The correct title appears in Applicant's specification: "Hear" appears in the title in the PTO "bib" Sheet, so authorization was not solicited from Applicant's representative for the amendment to the title.

In the abstract, replace all 13 lines of the abstract with --An elongate tubular heat transfer element having a longitudinal tube axis that runs through the hollow interior of the heat transfer element. The heat transfer element includes a wall of monolithic construction having an outer surface and an inner surface. The wall is formed from a composite material including a matrix and rovings embedded in the matrix. The composite material is in contact with the hollow interior such that the inner surface determines a boundary of the hollow interior which extends longitudinally along the axis of the heat transfer element. The matrix is of a fluoropolymer having embedded therein rovings of boron-free chemically resistant glass fibres. The rovings include from about 20% to about 60% by volume based upon the volume of the composite

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material, rovings that extend longitudinally in a lengthwise direction parallel to the axis of the heat transfer element and rovings that extend spirally around the axis--.

In claim 53, line 2, insert --that runs through the hollow interior of the tubular heat transfer element-- between "axis" and "and", replace "and comprising" with --wherein the tubular heat transfer element comprises--; in lines 3-4, delete "which determines a boundary of a hollow interior which extends longitudinally of the tube axis of the heat transfer element"; in line 6, insert --such that the inner surface determines a boundary of the hollow interior which extends longitudinally along the tube axis of the heat transfer element-- between "interior," and "and".

In claim 55, line 5, replace the first instance of "rovings" with --a plastics material and rovings embedded in the plastics material--.

In claim 56, line 4, insert --wherein the first, second and intermediate layers each include a plastics material and rovings embedded in the plastics material-- between "layers," and "and".

In claim 58, line 2, insert --that runs through the hollow interior of the tubular heat transfer element-- between "axis" and "and", replace "and comprising" with --wherein the tubular heat transfer element comprises--; in lines 3-4, delete "which determines a boundary of a hollow interior which extends longitudinally of the tube axis of the heat transfer element"; in line 6, insert --such that the inner surface determines a boundary of the hollow interior which extends longitudinally along the tube axis of the heat transfer element-- between "interior," and "and".

In claim 59, line 5, replace the first instance of "rovings" with --a plastics material and rovings embedded in the plastics material--.

In claim 60, line 4, insert --wherein the first, second and intermediate layers each include a plastics material and rovings embedded in the plastics material-- between "layers," and "and".

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5. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to teach or suggest an elongate tubular heat transfer element having a longitudinal tube axis that runs through the hollow interior of the heat transfer element where the tubular heat transfer element comprises a wall that is formed from a composite material comprising a matrix and rovings embedded in the matrix, where the composite material is in contact with the hollow interior of the heat transfer element such that the inner surface of the wall determines a boundary of the hollow interior of the heat transfer element which extends longitudinally along the axis of the heat transfer element, where the matrix consists essentially of any of the claimed fluoropolymers, where the rovings comprise boron-free chemically resistant glass fibres, where the rovings comprise the claimed volume percentage relative to the volume of the composite material and where the rovings include rovings that extend in the different directions as claimed.

The combination of references proposed in the 35 U.S.C. 103 rejection of claims 53 and 58 made of record in paragraph 6 of the previous Office Action mailed December 27, 2005 does not result in the claimed structure since the proposed arrangement of the fiber strips of Swozil et al. in the pattern taught by Baurmeister does not result in a structure where the composite material of the fiber layer of Swozil et al. is in contact with the hollow interior of the tube of Swozil et al. such that the inner surface determines a boundary of the hollow interior which extends longitudinally along the axis of the heat transfer element because the fiber layer of Swozil et al. covers the PTFE tube body (col. 1, line 66-col. 2, line 20 and col. 2, lines 61-65), so the fiber layer of Swozil et al. is separated from the hollow interior of the tube of Swozil et al. by the PTFE tube body, and therefore the fiber layer of Swozil et al. (which comprises a material

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that corresponds to the claimed composite material) is not in contact with the hollow interior of the tube of Swozil et al. The PTFE tube body, which does not contain a material which corresponds to the claimed composite material, is the only layer of Swozil et al. that is in contact with the hollow interior of the tube of Swozil et al. Applicant intends the hollow interior of the tubular heat transfer element to be the interior of the tubular element, that is, the space within the tubular element that is surrounded by the innermost layer of the tubular element, as opposed to any other portion anywhere on the tube that could be construed as a "hollow interior": this is clear from Applicant's arguments throughout the prosecution history of the application, including the arguments in the Appeal Brief filed May 30, 2006, and the fact that this meaning of the "interior" of a tube is the ordinary meaning of "interior" when used to describe the interior of a tube without any further clarification. The Examiner's Amendment in claims 53 and 58, which clarifies Applicant's intended identification of the "hollow interior", overcomes the 35 U.S.C. 103 rejection of claims 53 and 58 made of record in paragraph 6 of the previous Office Action mailed December 27, 2005 because, with the Examiner's Amendment in claims 53 and 58, none of the spaces outside of the PTFE tube body of Swozil et al. and between the fibers arranged in the pattern taught by Baurmeister of the fiber layer of Swozil et al. (as described in paragraph 6 of the previous Office Action mailed December 27, 2005) can be considered to be "the hollow interior" of the tubular element for the reasons discussed above in regard to Applicant's intended meaning of "hollow interior".

6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

*Conclusion*

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B. Aughenbaugh whose telephone number is 571-272-1488. While the examiner sets his work schedule under the Increased Flexitime Policy, he can normally be reached on Monday-Friday from 8:45am to 5:15pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is to 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter B. Aughenbaugh

08/03/06

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